

**“DRIFT SEEDS” AND “DEAR DIRTY DUBLIN”: CORRESPONDENCE  
BETWEEN JOHN MUIR AND MATILDA C. KNOWLES, 1930–1933**

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**ABSTRACT**

Between 1930 and 1933, Dr John Muir of Riversdale, corresponded with Miss M. C. Knowles, botanist in the National Museum of Ireland, Dublin, about drift seeds. Their letters, published herein, reveal some of the problems faced by Muir in his research on alien beach drift, and the extent of the assistance he received from Dublin.

**UITTREKSEL**

“DRIFT SEEDS” EN “DEAR DIRTY DUBLIN”: BRIEFWISSELING TUSSEN JOHN MUIR EN MATILDA C. KNOWLES, 1930–1933

Tussen 1930 en 1933 het Dr John Muir van Riversdal briewe met Mej. M. C. Knowles, plantkundige aan die Nasionale Museum van Ierland, Dublin, gewissel oor dryfsaad. Hulle briewe onthul sommige van die probleme waarmee Muir te doen gekry het in sy studie van uitheemse opdrifsele en die hulp wat hy van Dublin ontvang het.

**INTRODUCTION**

One of the most important contributions to research on long-range dispersal of plant propagules by ocean currents was made by Dr John Muir, who carried out a very detailed and extensive survey of alien fruits and seeds in the beach drift of southern Africa.

John Muir (1874–1947) was born in Scotland and qualified as a doctor of medicine at the University of Edinburgh in 1896. In the same year he emigrated to South Africa where he practised medicine for nearly thirty years. Muir eventually settled in Riversdale, and after retiring from medical practice in 1923, he concentrated on botanical research. As a medical practitioner, Muir worked on haemophilia, and according to one of his letters to Miss Knowles (see below), he spent two months at the Coombe Hospital in Dublin in 1910.

Muir's botanical research was wide-ranging, and gained him honorary doctorates from the Universities of Edinburgh and Stellenbosch. However, his interests also included sea-shells, ornithology, genealogy, folk-lore and he collected the vernacular names of plants, shells, and birds in the Riversdale region (see Hopkins, 1972; van Blerk, 1972).

In their recently published work on tropical drift fruits and seeds, Gunn & Dennis (1976) said that without Muir's studies the beach drift of Africa “would be

virtually unknown''. Muir visited beaches on the Mozambique, Congo and Cameroon coasts, as well as those in South Africa (Gunn & Dennis, 1976). He made extensive collections of "drift seeds'', which are preserved in the University of Stellenbosch (STE-U), and he obtained seeds from living plants to aid identification of the beach collections. Muir published his data in a series of scientific papers and popular articles (e.g. Muir, 1929a, 1929b, 1931a, 1931b, 1932, 1934, 1937).

#### CORRESPONDENCE WITH DUBLIN

A major problem faced by research workers studying "drift seeds" is the identification of specimens, which is intensified as the "seeds" are not attached to plants whose characters could aid identification. The disseminules of genera of Leguminosae especially are difficult to identify to species level (Gunn & Dennis, 1976). Muir's correspondence with Dublin arose from his need for assistance with the identification of his specimens.

It seems, from extant letters, that Muir first wrote to Ireland in order to get a copy of a paper published by Nathaniel Colgan (1919) on Irish "drift seeds''. This first letter probably was addressed to Dr. R. L. Praeger, the leading Irish botanist at that time, and Praeger sent a copy of the paper to Muir; this letter is not extant. The earliest surviving letter, written by Muir to Praeger, thanks Praeger for the Colgan paper, and requests assistance with identification.

In 1915, Dr H. B. Guppy who was studying tropical "drift seeds" (see Guppy, 1917) presented to the National Museum of Ireland a collection of seeds and fruits of West Indian plants whose propagules were recorded from beach drift in the British Isles as well as "seeds and fruits . . . that have not yet been recorded from the beaches of the United Kingdom though it is likely that some of them have been picked up but have not been identified"<sup>1</sup>. Guppy hoped that this collection "though not a large collection . . . (would) be of a little service in directing once again the attention of botanists in Ireland to this subject"<sup>2</sup>. Guppy (1917) noted that he had presented this collection to Dublin, as did Colgan (1919).

Muir's letter requesting identification assistance was passed to Miss Knowles, the "Lady Assistant" in charge of the museum's botanical collections. Miss Knowles studied the specimens sent in by Muir, and sent him a set of notes on the material after she had compared the seeds with those in Guppy's collection. In his reply thanking Miss Knowles for her aid, Muir complained that Kew had not given any help, even though there was a very large collection of "drift seeds" in the Royal Botanic Gardens. Undoubtedly, Muir was very grateful for the assistance given by Miss Knowles, and the friendly though sporadic correspondence that continued until 1933 clearly indicates the rapport that arose between Dublin and Riversdale.

In gratitude for Miss Knowles' help, Muir sent to Dublin a small collection of seeds and fruit, both beach drift and fresh specimens. These specimens are

preserved in the herbarium of the National Botanic Gardens, Glasnevin (DBN) along with Muir's letter and some rough drafts of Miss Knowles' replies; the botanical collections of the National Museum were transferred to the National Botanic Gardens in 1970. Muir also sent offprints of some of his papers and articles; these are also held in Glasnevin. As noted, Muir's own collection of "drift seeds" is preserved in the University of Stellenbosch (STE-U), along with letters from Muir's correspondents, including Miss Knowles; no letters from Dr Praeger are preserved in Stellenbosch (Jordaan, pers. comm.), though perhaps none was written.

Miss Knowles' last letter to Muir, thanking him for an offprint of one of his papers (Muir, 1932) was written a few weeks before she died after a short illness (Praeger, 1949).

# THE LETTERS

The letters are published in chronological order, and are printed in full; some of the rough drafts included in the Glasnevin archives are not included. Copies of Miss Knowles' letters (originals in STE-U) have been placed in the Glasnevin archives, and copies of Muir's letters (originals in DBN) are available in the University of Stellenbosch.

This first letter was written to Dr Praeger; it was passed by Praeger to Miss Knowles and therefore is preserved with this correspondence.

The original spelling and punctuation of the letters are retained in this paper.

"Leeuwarden"  
Riversdale  
2 June 1930

Dr John Muir  
(M.B., D.Sc.)

Dear Mr Lloyd Praeger,

Very many thanks for the valuable paper by Mr Nathaniel Colgan<sup>3</sup> on the larger alien Irish Beach Drift. I am only sorry that I cannot consult Dr Guppy who passed away in 1926. I have been unable to get a single seed named, although the Buitenzorg people in Java sent me a nice lot of cultivated seeds and fruits.

I have just found that *Barringtonia speciosa*<sup>4</sup> reaches here.

I am venturing to send you a few seeds and would be very grateful if you would have them compared with Guppy's which he gave to the National Irish collection. If you will return them to me I wd. send some to you later if they wd. be acceptable.

352:83<sup>5</sup> Kew named these near *Entada* sp. but they are *Azelia bijuga* [= *Intsia bijuga*] I feel sure. They grow when sown and the leaves are not quite the same as *Intsia bijuga* from Madagascar, or the seeds are larger than those I have seen from Calcutta and the Philippines. Still I am nearly certain.

171.40. These must be *Dioclea* sp. Did Guppy give you anything like these?

255.373. These I think must be *Strongylodon ruber* (*lucidas*)? Do they resemble any form of *Mucuna urens* known to you? Is the cosmopolitan polyzoon on 255 *Membrani-*

*pora*? No one in S. Africa knows it. If so Mr Colgan has solved one of my difficulties for me. They may be *Mucuna* sp.

36. Must be *Dioclea reflexa*: black form

324. Must be *Dioclea reflexa*: brown form

445, 443, 26, 314: various types of *Mucuna* spp unknown to me and everyone I have consulted.

*Entada scandens*<sup>6</sup> and *Caesalpinia Bonducella (crista)*<sup>7</sup> as being abundant and well known I have not sent nor the usual Rhizophoraceae and other mangroves.

All were picked up here. If you care to lecture on them I have not the slightest objection, senders rights protected.

I know all the seeds mentioned by Mr Colgan, as I have *Sacoglottis* from Trinidad.

With Kind regards, I remain

Yours sincerely

John Muir.

They must all come from Madagascar, Malaya or E. Indies. None are African.

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A note, in pen, is written on the first page and reads "Seeds returned & notes on comparisons with those in our collection. July 4. 1930 MCK".

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Ard-Mhusaeum Na h-Eireann  
(National Museum of Ireland)  
Sraid Chill Dara  
(Kildare Street)  
Baile Atha Cliath  
(Dublin)

July 4 1930

Dear Dr Muir,

As Dr Lloyd Praeger was leaving Dublin for some weeks when your letter & box of drift seeds arrived he passed these on to me and asked me to make the comparison with the drift seeds in our collections and let you know the result. As Dr Praeger has probably told you our collection is a small one composed almost entirely of the seeds that reach our Irish shores. These have however all been vouched for by either Mr Colgan or Dr Guppy, so although our collection is a very limited one it is reliable so far as it goes.

It has been very interesting to compare your seeds with ours but I am afraid you will find the results very disappointing. I have made a few notes on a separate sheet [see below]. It will be a satisfaction to you to find that your *Membranipora* on No. 255 is *M. tuberculata*. I sent the seed to Mr Farran of the Department of Fisheries and enclose his note about it which you need not trouble to return<sup>8</sup>. I also showed it to Mr Nicholls who used to be keeper of the Natural History Collections here & who specialized in this group and he too considers it "almost certainly" *Membranipora tuberculata*. I am indeed very sorry and disappointed that our collection has not proved more helpful in solving your difficulties. The seeds of these Leguminous climbers seem to vary a good deal even in the same species which makes the identification troublesome & uncertain.

Dr Guppy was a great loss. I wonder where his collection went to?<sup>9</sup> I should have expected Kew to get it, but it may have gone to the Natural History Museum, South Kensington, London. Mr Ramsbottom is the present Keeper of the Botanical Collections

there & would I am sure help you in any way he could if you wrote to him. Dr Rendle retired a few years ago.

I am returning your seeds as requested & hope they will reach you safely.

With best wishes  
Yours sincerely  
Matilda C. Knowles  
Assist. in charge of the  
Botanical Collections

P.S. It is very kind of you to offer us some seeds & we should be most grateful for any you can spare us.

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A rough draft of the notes on Muir's seeds in Miss Knowles' writing is preserved in DBN; it is printed here. Corrections to the notes have been edited into their correct places in the text.

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#### Drift seeds—South African—from Dr Muir

353.83. We have nothing at all like these in our drift collection. I have also looked up *Azelia* in our Herbarium as sometimes there are seed samples attached, but our only species is *A. africana*. *A. bijuga* probably belongs to the section with no arillies.

171.40 We have one mottled seed similar to these but rather larger & thicker in tone, with a darker raphe. Guppy labelled this *Dioclea reflexa*. Your seeds agree very well with his description of the seeds of this species in "Plants, Seeds and Currents" p. 131 and no. 40 though slightly smaller is similar in shape to fig. 6. in the plate at the beginning of this book.

255, 273 These are not exactly like any seeds of *Mucuna urens* in our collection, they are smaller & the raphe does not encircle the seed so much as in our samples of *Mucuna* but more than in *Strongylodon* or *Dioclea* according to the descr. in *Genera Plantarum* of these genera. They are rather like two seeds amongst those Guppy gave us labelled "*Dioclea* (probably) *guyanensis*" except for being a little less round (but they seem to me to be too round for *Dioclea*<sup>10</sup>). I do not know *Strongylodon* but the hilum is described in *Genera Plantarum* as being *semicircata* while these are more than  $\frac{3}{4}$ . Mr Farran of the Fisheries Department thinks the polyzoon encrusting No. 255 is *Membranipora tuberculata*.

36, 324 are very like *Dioclea reflexa*. They are rather flatter than our specimens and 36 is more oblong in shape otherwise similar. There is one seed that is identical in every respect with your number 324 (and one or two other very similar) amongst a sample of drift seeds we have from Keeling or Cocos Island<sup>11</sup>, given us many years ago by the then Director of Kew Gardens and labelled "*Mucuna* sp." There are a number of undoubted *Mucuna* seeds in the sample but those similar to your 36 are more like *Dioclea reflexa* I think.

443 We have nothing like<sup>12</sup>

26 We have nothing like this

314

445 more like "*Dioclea*" than "*Mucuna*" I should say<sup>13</sup>

Miss Knowles returned Muir's seeds to him and received the following letter.

29 July 1930

Dear Miss Knowles,

Your letter of July 4th is just about the most helpful communication I have ever received during two years work at the alien and local Beach Drift. Mr N. E. Brown, a very old friend, wrote by the same mail and I hear from him nearly every week. He says that the collection of beach drift at Kew is immense but that no one ever works at it.

Kew did not name a single one of my species and were not one tenth as helpful as you with your small collections.

Please thank Mr Farran for naming the *Membranipora*.

This is just a short note of thanks and to give you a piece of what to me is important news.

My 352 & 83 which you write about as follows "We have nothing at all like these in our collections" and named at Kew "near *Entada*" is *Afzelia bijuga* A. Gray (= *Intsia bijuga*) I received seeds from the French authorities at Madagascar ten days after I wrote to you. You will see much about them in Guppy's "Nat. Pacific" II<sup>14</sup>. They have not before been found in the beach drift of other tropic regions (ib. 174). The Riversdale beach is temperate and my seeds which are washed up come almost entirely from Madagascar. I have pleasure in presenting you with one of each.

I agree with you entirely that my 36 and 324 (the latter identical you say with one of Guppys from the Cocos Islands named at Kew *Mucuna* sp.) is *Dioclea* & not *Mucuna*. I cut them open & they have no intercotyledonary cavity. The kernal floats independently of the testa for some time, & they belong to the Sect II of the group of non adaptive seeds (*Nat. Pac.* II 107). Do you remember which one in your collection is= my 324 (unspotted, dark brown)?

I am also sending you a short paper on the Folk Lore of these seeds<sup>15</sup>. *Ent. scandens* & *Caesalp. Bonducella* grow in Port. East Africa. I have a pod of the former 37" long, and the prickly pod of the latter.

I have been working through Schimpers "Die Indo-Malayisch Strandflora"<sup>16</sup>, a rare book now a days which took me a year to get. Guppys paper in *Journ. of Vict. Instit.* in the Keelings has so far eluded me<sup>17</sup>. I was glad to get Colgan's fine paper.

It is fine to see your name in Guppys *P.S. and C.*, & to receive a letter from some one who knew Guppy which I never did<sup>18</sup>.

In 1910 I had two months at the Coombe Hosp. Dublin & spent one of the happiest times of my life in that unsavoury although in other respects delightful surroundings. My recollections of Ireland have always been of the pleasantest.

Some of my seeds have gone to Madagascar, Mauritius & Calcutta.

Calcutta seeds of *Afzelia bijuga* & one lent me by Kew from Luzon agree; but they are much less massive than the Madagascar ones. Either more than one species is included under that name, & the genus requires revision, or it varies enormously.

I will send duplicates of seeds later, if Calcutta or Antananarivo<sup>19</sup> recognise them.

With best wishes

I remain, Yrs sincerely  
John Muir

Dublin. August 27 1930

Dear Dr Muir

I am just going off for my belated summer holiday but I must send you a few lines before I go to thank you for your very kind letter of July 29th & for the valuable additions to our Drift Seed Collection which arrived safely a few days ago.

I am delighted to get the two seeds of *Afzelia bijuga*, one from Madagascar & one from the Riversdale coast & also the two samples of *Scaveola (sic)*<sup>20</sup> & I think it is most awfully good of you to have rewarded my small efforts so generously. I shall incorporate them in our Drift Seed Collection on my return<sup>21</sup> & I am sure some worker at the subject will one day bless you. Accurately named specimens are not easy to get.

I wish Guppy had lived to know that you have become so interested in this fascinating but difficult & tedious question of the Drift Seeds. It is such a help & stimulation to have a fellow enthusiast to discuss ones problems with. I did not know him personally—only through correspondence.

I shall pass on your message to Mr Farran on the first opportunity I am sure he will be glad to know he has been of use.

Dr Praeger looked in here yesterday & was asking for you. He is just back from the Botanical Congress at Cambridge where they had a very busy week over the revision of the Rules of Nomenclature, which they seem to have settled satisfactorily. He was much pleased to learn that Colgan's paper had proved of interest to you. I have promised him the loan of your paper on the Folk Lore of *Entada* & *Caesalpinia*<sup>22</sup>.

You will have to come over & work out the Drift seeds at Kew yourself & if so you will probably run across and renew your acquaintance with "dear dirty Dublin" & pay us a visit here. I should enjoy going through our collection with you.

With renewed thanks & apologies for this scrappy letter. I am yours sincerely

Matilda C Knowles<sup>23</sup>

P.S. I made a note of the seed I thought like your no 324<sup>24</sup>

Riversdale 19.8.1930

Dear Miss Knowles

Guppy's paper "Dispersal of Plants as illustrated by the Flora of Keeling Atoll." *Journ. of Vict. Inst. Lond.* 1889 (1890) is unobtainable in S.Afr. and I have not yet got it from Edinburgh or London. Is it very long? If not cd. you have a precis made by one of your staff in exchange for seeds? I can send you

*Canavalia obtusifolia*

*Ipomoea pes-caprae* (fresh and from drift)

A pod of *Caesalpinia Bonducella* with its two seeds in situ

*Strongylodon lucidus* (= *ruber*), named since I received your letter at Calcutta, confirming my suspicions. They are the seeds of mine that you saw (see Guppy *Nat. Pac.* II).

Please note for your private information that my seed 324, which you say = one of Guppy from the Keeling Atoll in your possession, named *Mucuna*, but which I said is *Dioclea*, is now named by the Calcutta people *Dioclea javanica* Bth<sup>25</sup>. My *Afzelia bijuga* seeds are also now confirmed as such by them, which I had anticipated.

*D. javanica* is not mentioned by Guppy in any of his works, being probably under the 3 or 4 "*Mucuna* spp." mentioned from Keeling in his paper.

I remain

Yrs sincerely

John Muir

Did I send Dr Lloyd Praeger a copy of my paper (*Bot. Survey of S.Afr.*) "Veget of Riversdale"? He is well known by reputation in S. Africa

Copies of Muir's earlier papers on drift and his "Vegetation of Riversdale" are preserved in Glasnevin; the copies are signed by Muir. In the archives at Glasnevin there is a rough, incomplete draft of a reply to the above letter. This draft is dated October 7 1930, but there is no letter with this date in the archives at the University of Stellenbosch. It must be assumed that Miss Knowles did not send the letter, and that Muir's next letter reminded her about replying.

Riversdale, 19 Nov. 1930

Dear Miss Knowles

I send you the little book<sup>26</sup> under separate cover, also in this letter a few seeds of *Ipomoea pes caprae* (= *I biloba*) from the beach drift of Pondoland (Urnzinivuba River at St. John's) The bare ones are the typical: the others are fresh.

I do not know what to do about the paper of Guppy's. It is the first of those mentioned under his name in *Plants Seeds & Currents* p.vii (Dispersal . . . Keeling Island) The year was probably 1890. I have seen the 1889 number but although there was some thing about Keeling Island by him in it it did not deal with the drift at all.

The Vict. Instit. is more a religious society, and I cannot get a copy of the paper in any scientific library.

Would the incumbent of St Patricks Cathedral [Dublin] not have it in their library?

With kind regards, & hoping the seeds will escape the Post Office stamp.

Yours sincerely  
John Muir

Dublin, Decr 9 1930

Dear Dr Muir

Your letter with the nice little batch of seeds of *Ipomoea pes Caprae* and your fine paper on "The Vegetation of the Riversdale Area" all arrived this morning. Thank you very much indeed for them I am looking forward to reading your paper with much interest.

I was just about to write to you when your letter came to tell you that through Dr Praeger<sup>2</sup> I was able to get a short loan of Guppy's paper on the "Dispersal of Plants as Ill. by the Flora of Keeling or Cocos Islands" and made a few extracts for you just to let you know roughly the contents of it. These are so rough I am almost ashamed to send them as I have not had time to type them out; but they will let you see the plan of the paper. I was talking to Dr Praeger about how to have an abstract made for you, but he is of opinion that no abstract is really reliable & that it would be much more satisfactory for you to see the original paper and he said that he was quite sure if you know any member of the Linnean Society that he could borrow it for you. Dr Praeger says the Linnean Society constantly lends books to specialists who are living abroad who have not a good library near. I do hope you will be able to get the paper as it is very annoying not to be able to see the whole literature on the subject one is studying. I am so sorry I have been able to do so little to help you in this matter.

With kind regards and very good wishes for Christmas & the New Year

I am yours sincerely  
Matilda C Knowles

Riversdale, 30 XII 1930

Dear Miss Knowles,

Many Thanks for the great trouble you have taken in making a precis of Guppy's article. I have ordered the book itself from Edinburgh as they once sent me the previous vol of the series. Guppy's own reference to his paper gives the wrong year! Schimper gives it as "about 1890". Thus I cd never tell them exactly what I wanted.

I am (notwithstanding the above address) in my summer abode on the Indian Ocean at Still Bay, 25 m from Riversdale. I will send you some fruits and seeds when I return home about Jany. 24th.

In May I hope to go to Lourenzo Marques. Did I send you seeds of *Ipomoea (Calonyction) Bona Nox*, which float well but are said by Guppy to be "variable"? I think I did.<sup>28</sup>

Would you care for the seedlings of the mangroves (*Rhizoph. mucronata* and *Bruguiera gymn.*<sup>29</sup>) for the museum sheets or for the students?

*Entada scandens* and *Caesalpinia Bonducella* I will see in any quantity growing. I have any quantity of seeds from the drift as well.

I have lately settled the problem for S.Afr. of *Aleurites*, *Sophora tomentosa* and *Erythrina indica*.

I have had a bad set back with French red tape which will amuse you. The Director of Agric. Mauritius (who died in Nov.) sent some of my seeds to the Chief of Agric. Madagascar. Both are or were Frenchmen. The Postal authorities of Madagascar wd not allow the entry of my seeds as they are contrary to regulations (fear of diseases &c). and returned them to Mauritius. The Chief of Agric Madagascar was quite willing to examine them but cd. not get them through the customs.

My seeds all belong to Ewarts macrobiotic group and may have been 5 to 100 years old for all anyone knows.

The Madagascar man is the only authority living who cd. name the seeds some of which I gave or lent you. How to manage I do not know, but neither Guppy nor Schimper ever got their *Mucuna* spp. named as the genus is very difficult to determine from seeds.

Otherwise my work is finished.

The Gvt. has ordered seeds for me from Zanzibar, Ceylon, Singapore and Buitenzorg, but the Miss Knowles' of this world are few and far between, and it is rare to find governments or people who will do as much for you, as you would do for them.

With very best wishes

I remain yrs very sincerely  
John Muir.

Riversdale, 10.2.1931

Dear Miss Knowles,

I am sending you herewith the following from Portuguese East Africa, although they are I am sure (being also W. Indian) all represented in your noble collection; but of interest maybe because of their new locality:<sup>30</sup>

6 fresh seeds of *Entada scandens* taken from the shrub

5 segments of the hugh pod of the same which is over 3 ft long. If you glue them together on a flat stick they make a nice specimen. There are often 11-13 segs.

Seeds of *Caesalpinia Bonducella*

Pod of *Caesalpinia Bonducella*

2 fruits of *Anacardium occidentale* L. (Cashew Nut) This had poor powers of flotation, but is discussed by Guppy.

With Kind regards

I remain Yours sincerely  
John Muir

I have put in a pod of *Canavalia obtusifolia*. These fresh materials are instructive when placed as controls against drift stuff. Of the latter I have abundance—about 600 seeds of all kinds. Is there anything you would like?

I wish I were back at the Coombe [in Dublin], walking through the dirty streets, with the Irish women all shouting "Good Luck"! I will never forget Dublin, hence also these seeds. Now I am too old alas!

Dublin March 9 1931

Dear Dr Muir

Thank you very much indeed both on my account and on behalf of the Museum for the very nice box of seeds that arrived safely a few days ago. Especially for the pod of *Caesalpinia Bonducella* (of which we had no sample) and also for the pod of *Canavalia obtusifolia*.

It is an excellent suggestion of yours to mount the fresh seeds and place them as controls against the Drift Seeds and I am carrying it out. Our collection will soon be a "noble" one indeed thanks to the many additions you have so kindly sent us.

We are also very pleased with the sections of the *Entada* pod you have given us. We already had a number of sections of a slightly parger pod, but I think yours is really better for exhibition purposes as our show cases are not very large so I am mounting them in the way you describe.

Dublin sends you greetings! At present it is in a whirl of excitement, which I am not very sure is good for it, about the Hospital Sweep Stake<sup>31</sup>. I hope your old friend the Coombe may benefit. With Kindest regards and wishing you the best of good luck

I am  
yours sincerely  
Matilda C. Knowles

I hope you succeeded in getting Guppys paper?

Riversdale 20.4.1931

Dear Miss Knowles,

I am sending you hypocotyls of two Eastern Mangroves, which you may not have, see Guppy *Nat. Pac.* II.

They will look well glued on cartridge paper some with fruits attached others separate:

[here there is a pen sketch to illustrate the mounting technique suggested]

You will find *Ceriops* illustrated in Schimper's "*Indo-malayische Strandflora*"

The *Rhizophora* in the Western Mangrove is a different species *R. mangle* (Guppy *P.S.C.*)

I am going up I hope to Portuguese E. Afr. in June, when there is no malaria to have a hunt round and see what I can get lying on the tropic beaches.

I have not succeeded in getting Guppy's Keeling Is paper yet, but I am doing my best to get the volume. I got the old Volume of the Journ. of the Linnean Society with Baron's Madagascar paper from Prof. Thoday of Bangor as a present last week.

Guppy published his papers in a religious transactions, which is perhaps the reason why botanists do not have them! Anyhow they are almost unobtainable today I tried more than a year to get Schimpers "*Indo-mal Strandflora*" and at last got it in Leipzig through the intermediations of a Hollander.

The papers issued by the Buitenzorg Gardens in French & German are hard to get: I mean the Krakatoa ones.

With kind regards, I remain  
Yours sincerely  
John Muir

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Dublin 16 Decr. 1931

Dear Dr Muir

I must apologise for not having sent you a line or two sooner to thank you for all the interesting matter about Drift seeds that I have received from you in the last few months. You are most kind & we are very grateful to you. I have received “The Romance of a Floating Seed”<sup>32</sup> most interesting reading. How pleased you and Mrs Muir must have been to run your bean to earth, and what an ingenious plan you adopted to locate it. I congratulate you on your thoroughly satisfactory piece of Research & I am glad to know that *Mucuna quadrilata* is the same as *Mucuna gigantea*. The crocodiles and the hippopotami were interesting side shows that I could have done without. You speak feelingly of the suffering of those who have the misfortune to get the hairs of the pod into their clothes. No wonder the natives call them “i-mamba”. I must have some extracts made from your account for my Drift seed case.

With very many thanks and the best of good wishes for 1932 from  
Matilda C Knowles

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For over a year, there was no correspondence between Muir and Miss Knowles. We may presume that he had exhausted the usefulness of the very small collection of seeds in Dublin, and, as he himself had said, his work was “finished”.

Muir’s next letter to Dublin enclosed a copy of his paper on drift seeds (Muir, 1932), which was the result of his research, and was probably the reason for stating that his work had finished. Muir did not end his work at that point, however, as he published further articles including his most important paper on drift seeds several years later (see Muir, 1934, 1937).

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Riversdale 13 Febr. 1933

Dear Miss Knowles

I send herewith a paper containing two plates of seeds.

Have you by any chance a seed of *Pangium edule* (Flacourtaceae) collected by Guppy in the Dutch E. Indies.

If you could let me see one I would send it back by the very first post, together with a fine fruit of *Heritiera littoralis* for your collection

Yours faithfully  
John Muir

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Dublin March 31 1933

Dear Dr Muir,

Thank you very much for the paper on "The Beach Drift of South Africa" with the two plates of seeds. These will be most useful here and helpful to all those studying Beach Drift.

I am very sorry we have no specimens of *Pangium edule*. in our collections or you should have had the loan of it with much pleasure.

I am resigning my post here on the 1st of June next and going up to Ballycastle in the North of Ireland to live with a sister who has a little house and a nice garden there. I am looking forward to a good rest during the summer.

If I find any interesting Drift seeds on the coast up there I shall let you know.

You have been so generous in giving us drift seeds for our collections and it is a great satisfaction to me to know that there is such a representative set here. Thank you very much for numerous contributions.

With Kind regards  
Yours sincerely  
Matilda C Knowles.

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Three weeks after writing this letter Miss Knowles died, and her sister died three days later (Praeger, 1949).

#### CONCLUSION

Although he stated that his work was finished in 1930, Muir did not in fact conclude his researches then. From other unpublished letters (from H. N. Ridley to J. Muir, in STE-U) we learn that Muir visited London and Kew at least once. Further, his main publications on drift fruits and seeds were published between 1932 and 1937.

The co-operation indicated by the letters published here, resulted in the assembly in Dublin (DBN) of a small collection of drift seeds and herbarium specimens of coastal plants. Muir acknowledged the help given by the Dublin botanists Dr. Praeger and Miss Knowles in his publications. There is little doubt that Muir greatly valued the help given by Dublin, and the short correspondence probably would have continued for many years had Miss Knowles not died.

#### ACKNOWLEDGMENTS

I am very grateful to Prof P. G. Jordaan for sending me copies of Miss Knowles letters and for his assistance with the identification of Muir's seeds. My thanks are also due to Dr C. R. Gunn for his help.

#### NOTES

- 1 DBN mss. H. B. Guppy to C. W. Steele, National Museum, Dublin, 10 May 1915.
- 2 DBN mss. H. B. G. to The Director, National Museum, Dublin, 25 May 1915.

- 3 *Proc. Royal Irish Academy*, 35B: 29–54. 1919.
- 4 correctly *Barringtonia asiatica* (L.) Kurz; see Gunn & Dennis (1976).
- 5 the specimens listed have been examined by Dr C. R. Gunn and identified as follows:
  - 352 and 83—*Intsia bijuga* (Colebr.) O. Kuntze
  - 171 and 40—*Dioclea reflexa* Hook.f.
  - 255 and 373—*Mucuna myriaptera* Baker
  - 36—*Dioclea reflexa*
  - 324—*Dioclea reflexa*
  - 445—*Canavalia* sp. (Muir named this *Canavalia bonariensis* Lindl.)
  - 26, 314 and 443—*Mucuna gigantea* DC.
- 6 correctly *Entada phaseoloides* (L.) Merrill; for discussion of *Entada* spp. see Gunn & Dennis (1976).
- 7 correctly *Caesalpinia bonduc* (L.) Roxb.
- 8 STE-U mss. G. P. Farran to M. C. Knowles, undated (copy only in DBN).
- 9 there are "drift seeds" collected by Guppy at Kew, as well as those already noted in DBN. There are no Guppy specimens in BM.
- 10 in transcribing this rough draft pencil insertions have been placed into the main text in the appropriate place. The section in brackets appears to belong here.
- 11 i.e. Cocos (Keeling) Islands in the Indian Ocean north of Australia.
- 12 Miss Knowles originally wrote "like *Mucuna* but raphe very narrow".
- 13 deleted in rough draft.
- 14 *Observations of a Naturalist in the Pacific between 1896 and 1899; vol. II Plant-Dispersal*. 1906, London.
- 15 Folk-lore of Some South African Sea Beans (Muir, 1929a): a signed copy was sent by Muir to Miss Knowles on 29 July 1930, although Muir dated it "29.7.31" (DBN).
- 16 Schimper A. F. W., *Indo-malayische Strandflora*. 1891, Jena.
- 17 Dispersal of plants as illustrated by the flora of the Keeling or Cocos Islands. *Journ. Trans. Victoria Inst.*, 24: 267–306 (1890).
- 18 Miss Knowles corresponded with Guppy (see Guppy, 1917) but no letters are extant. They never met.
- 19 Tananarive, Madagascar.
- 20 *Scaevola plumieri* Vahl; Muir sent fruits from shrubs with the dried pericarp intact (Riversdale Coast, July 1930) and "stones" from beach drift which had lost their pericarp (Riversdale Coast, July 1930); DBN.
- 21 material was incorporated and is still intact in DBN.
- 22 see 15 *supra*.
- 23 a rough draft of this letter, differing slightly from the copy sent is in DBN.
- 24 this postscript is added to the letter on the top of the first page. It seems that Miss Knowles wrote this letter before she received the letter sent by Muir on 19 August 1930, and that the footnote was in reply to that letter.

- 25 see 5 *supra*.
- 26 Vegetation of the Riversdale Area (Muir, 1929b); copy signed by Muir in DBN.
- 27 Praeger worked in the National Library in Dublin; he was Chief Librarian.
- 28 there are no seeds of this in DBN.
- 29 *Rhizophora mucronulata* Lam., *Bruguiera gymnorrhiza* Lam.
- 30 see 5 *supra*; specimens in DBN.
- 31 a lottery run to provide funds for Dublin hospitals and prize money for horse-racing.
- 32 Muir, 1931b.

## REFERENCES

- COLGAN, N., 1919. On the Occurrence of Tropical Drift Seeds on the Irish Atlantic Coasts. *Proc. R. Ir. Acad.* **35B**: 29–54.
- GUNN, C. R. and DENNIS, J. V., 1976. *World Guide to Tropical Drift Seeds and Fruits*. New York: Quadrangle/New York Times Book Co.
- GUPPY, H. B., 1917. *Plants, Seeds and Currents in the West Indies and the Azores*. London: Williams & Norgate.
- HOPKINS, H. C., 1972. John Muir. In: *Dictionary of South African Biography*. Vol. 2; pp. 500–501. Cape Town: Tafelberg-Uitgewers Ltd.
- MUIR, J., 1929a. Folk-lore of South African Sea Beans. *J. med. Ass. S. Afr.* **3**: 1–6.
- MUIR, J., 1929b. Vegetation of the Riversdale Area. *Mem. bot. Surv. S. Afr.* **13**.
- MUIR, J., 1931a. *Alien and Indigenous Fruits and Seeds in the South African Beach Drift*. Riversdale: private publication.
- MUIR, J., 1931b. The Romance of a floating seed (*Mucuna gigantea*). *South-western Echo* (21 November 1931).
- MUIR, J., 1932. The beach drift of South Africa. *J. bot. Soc. S. Afr.* **18**: 5–10.
- MUIR, J., 1934. The correlation of arrival sites of alien seeds with ocean currents. *S. Afr. geogr. J.* **17**: 13–18.
- MUIR, J., 1937. The Seed-Drift of South Africa and some influences of ocean currents on the strand vegetation. *Mem. bot. Surv. S. Afr.* **16**.
- PRAEGER, R. L., 1949. *Some Irish Naturalists*. Dundalk: Tempest.
- VAN BLERK, N., 1972. John Muir. In: *The Standard Encyclopaedia for Southern Africa*, Vol. 7, pp. 633–634. Cape Town: Nasou Ltd.